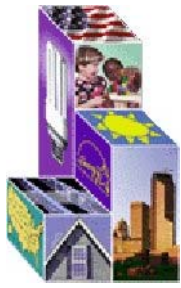


U.S. Department of Energy Workshop on Standards for Residential Furnaces and Boilers

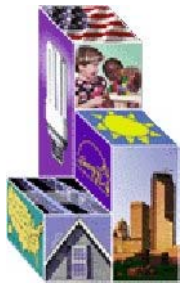
Cyrus Nasser

July 17, 2001



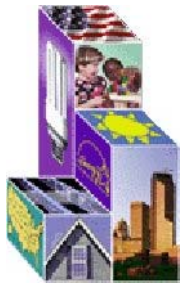
Energy Policy & Conservation Act (EPCA) Requirements

- EPCA requires standards to be set
- Any new or amended energy conservation standard prescribed by the Secretary for any type (or class) of covered product shall be designed to achieve the maximum improvement in energy efficiency, ...which the Secretary determines is technologically feasible and economically justified. (EPCA §325(o)(2)(A))



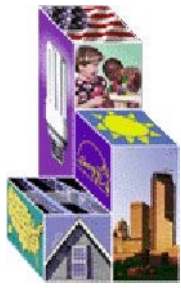
EPCA Requirements

- Residential Furnaces and Boilers are covered products. §321(23)
- EPCA set the initial standards. §325(f)
 - All (except those listed below): 78% AFUE
 - Boilers
 - gas steam: 75% AFUE
 - others: 80% AFUE
 - Mobile home furnaces: 75% AFUE.
- Special provisions for mobile home furnaces and “small” furnaces (< 45,000 Btu/h input)



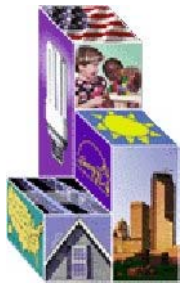
EPCA Requirements (Cont'd)

- “Small” furnace provisions. §325(f)(1)(B)
 - DOE to publish a final rule by 1/1/89, setting an AFUE level between 71% to 78%
 - Would apply to products manufactured from 1/1/92
 - Not likely to cause fuel switching
- Mobile home furnace provisions. §325(f)(3)(A)
 - DOE to publish a final rule by 1/1/92, determining if the 75% AFUE standard should be amended
 - Amendment would apply to products manufactured on or after 1/1/94



EPCA Requirements (Cont'd)

- Other provisions. §325(f)(3)(B)-(C)
 - By 1/1/94
 - Publish a final rule, determining if all the residential furnace and boiler standards should be amended
 - Amendments would apply to products manufactured on or after 1/1/2002
 - Between 1/1/97 to 1/1/07
 - Publish a final rule to determine whether all the residential furnace and boiler standards in effect for such products should be amended, and include such amendment, if any in this rule
 - Would apply to products manufactured on or after 1/1/2012



Delays Encountered

- FY'96 moratorium on standards
- DOE improved process rule (7/15/96)
 - Applied to products before NOPR stage, including residential furnaces and boilers
 - DOE would revise mobile home furnace analysis and NOPR and follow assigned FY priority levels
- Assigned a low priority in the following years
- Assigned a high priority in FY'01



Current Status

- “Small” furnace provisions: §325(f)(1)(B).
 - Final rule published on 11/17/89, adopting 78% AFUE
- Mobile home furnace provisions: §325(f)(3)(A).
 - NOPR published on 3/4/94
- Other provisions: §325(f)(3)(B)-(C):
 - First revision of standards (statutory effective date: 1/1/2002): ANOPR published 9/8/93
 - Second revision of standards (statutory effective date: 1/1/2012): TBD

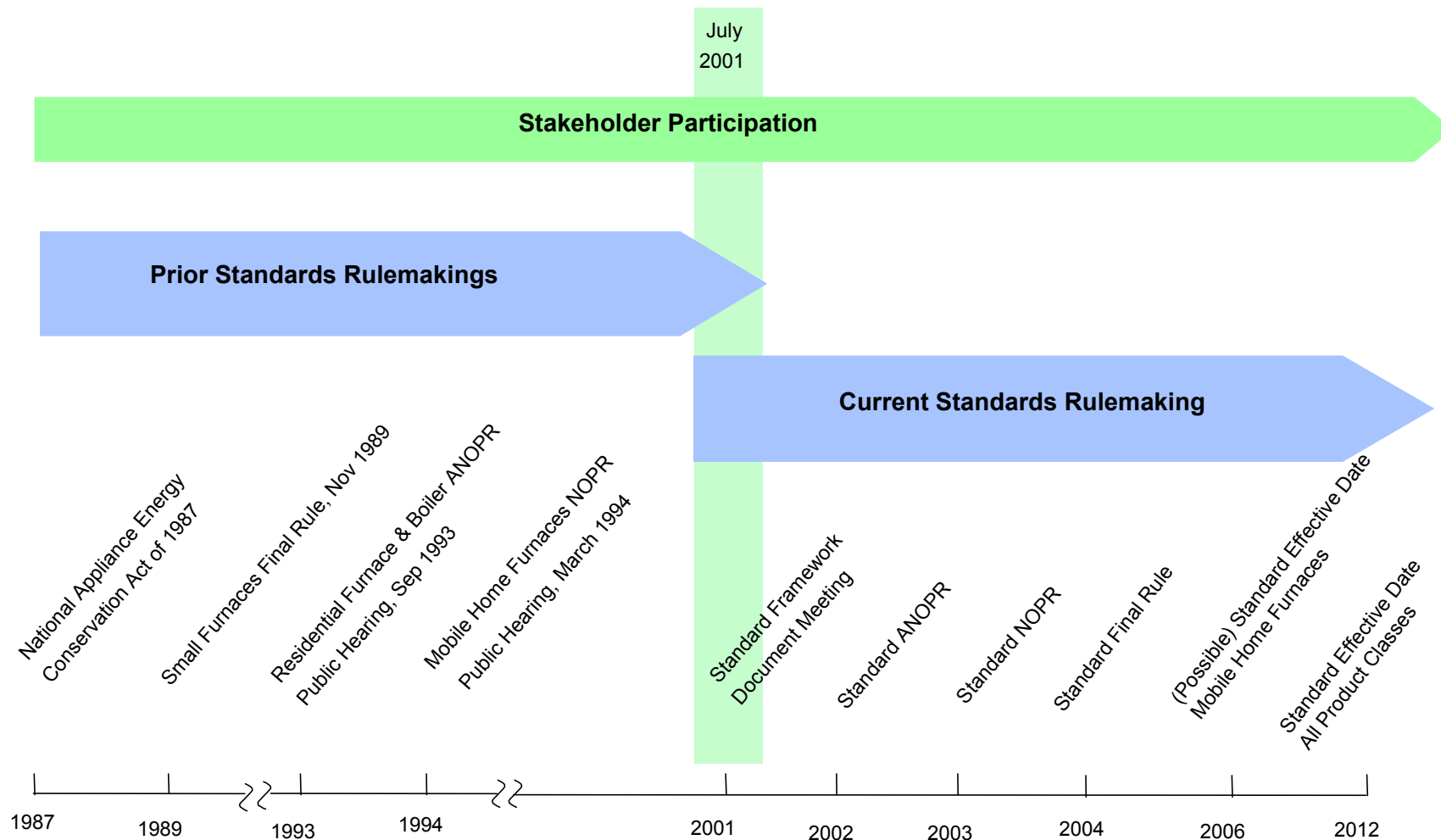


Mobile Home Furnaces

- Statute requires a two review approach (§325(f)(3))
 - A final rule by 1/1/92, to determine if the 75% AFUE standard should be amended. (Effective 1/1/94)
 - Final rule for all classes of residential furnaces and boilers on whether standards should be amended. (Effective 1/1/02)
- Statutory timeline not met due to delays
- Recommendations
 - First stage: Adopt an intermediate standard. (Effective at an earlier date)
 - Second stage: Adopt a possibly higher standard effective with standards for all product classes. (Effective at a later date)

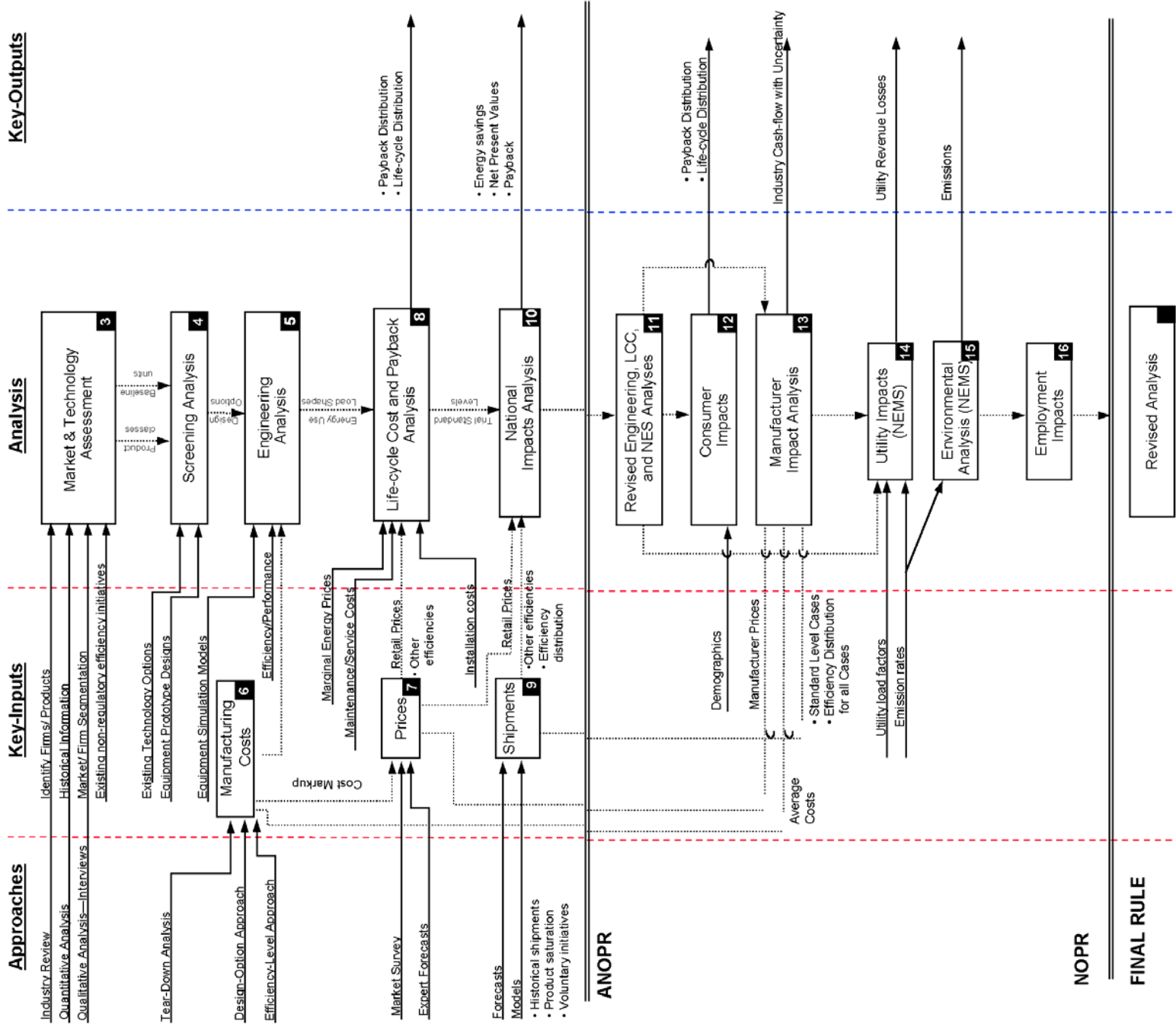


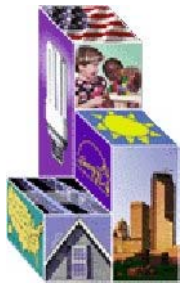
Standards Setting Process Timeline



Analytical Framework

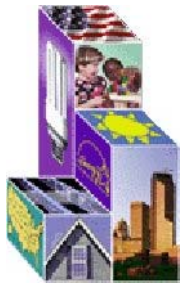
Residential Furnaces and Boilers





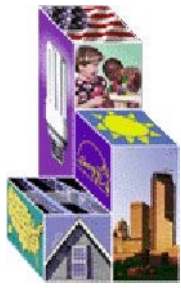
Discussion Topics

- Market and Technology Assessment
 - Product Classes
 - Baseline Residential Furnaces and Boilers
 - Screening Analysis
- Engineering Analysis
 - Retail Prices, Markups, and Installation Costs
 - Electricity Consumption



Discussion Topics (Cont'd)

- Other Analyses
 - Life-Cycle Cost Analysis
 - Consumer Sub-group Analysis
 - National Energy Saving and Net Present Value Analysis
 - Manufacturer Impact Analysis
 - Employment Impact Analysis
 - Utility Impact Analysis
 - Environmental Analysis



Next Steps

- Incorporate comments (due 8/17/01)
- Fine-tune analytical approach and conduct pre-ANOPR analyses (8/01-12/02)
- Publish
 - ANOPR (12/02)
 - NOPR (6/04)
 - Final Rule (11/04)